deliberations of the Congress. Perhaps, however, the most important of all (with the exception of the choice of electrical units) will prove to have been the impetus given to electrical science by the interchange of ideas that took place among the leading physicists of all nations, and the light that was thrown on the various problems which came under discussion in the meetings of the Congress.

I cannot conclude this imperfect sketch of this important Congress better than by quoting the eloquent words of M. Dumas at the conclusion of its sittings: "Greek mythology, in its happy personification of the forces of nature, placed the winds and the waves under the direction of divinities of the second rank; it made the celestial representative of light its god of poetry and of the arts; and by an admirable forethought, it reserved lightning for Jupiter. Science and industry have long since laid their hands on the forces which air and water have placed at the disposition of man. Steam, animated by fire, has enabled him to overcome many obstacles and to rule the waves. Light has no longer any secrets from science, and the arts are daily multiplying its marvellous applications. But there remained one labour to accomplish: namely, to wrest lightning itself from the hands of the ruler of the gods, and to bend it to the needs of humanity. This is the feat which the nineteenth century has now accomplished, and of which this Congress is the evidence and the witness. This feat will mark an epoch ever memorable in history; and, amid the turmoil of politics and of questions which agitate the human mind, it will be recognised as the characteristic feature of our era. The nineteenth century will be the century of electricity."

(*To be continued.*)

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

CAMBRIDGE.—The following is the speech delivered in the Senate House on November 24 by the Public Orator (Mr. J. E. Sandys, Fellow and Tutor of St. John's) in presenting Dr. Thomas Sterry Hunt for the Honorary Degree of LL.D.:—

"Dignissime domine, domine Procancellarie, et tota Academia:

"Scientiam illam Geologicam, quae, in orbis terrarum origine et natura investiganda, neque temporis finibus terminatur neque saeculorum spatio coercetur, nos certe pro rei magnitudine, temporis praesertim angustiis impediti, orationis brevissimae intra spatium laudare non possumus. Iuvat potius hodie scientiae tam magnae professorem insignem vestro omnium nomine salutare, qui in republica illa maxima trans Atlanticum natus, nostrae tamen, provinciae Canadensis rupibus explorandis quinque et viginti annos dedicavit; qui de omnium animantium (ut nonnullis videtur) antiquissimo, quod Eozoon Canadense nuncupatur, doctissime disputavit; qui (ne plura commemorem) non modo vetustissimorum illorum saxorum, quae Laurentia nominantur, sed aliorum quoque complurium originem primam vicesque varias sagacissime investigavit. Quid autem si, in tot tantisque argumentis totiens retractandis, non semper sibi constare, non semper eadem sentire, visus est? Vos certe ex Academicae philosophiae disciplina didicistis, virum vere sapientem (ut Ciceronis nostri verbis utar) 'quod dixerit, interdum, si ita rectius sit, mutare; de sententia discedere aliquando.' Ceterum idem necessitudinis vinculo in perpetuum duraturo nobiscum idcirco conjunctus est, quod professoris illius nostri, qui has inter umbras plusquam quinquaginta annos studiis Geologicis lumen praetulit, et interpres et defensor egregius exstitit. O utinam hospiti nostro, nuper ex Italia ad nos advecto, mox autem, favente (uti par est) Neptuno suo, in patriam transituro, inter tot aedificia variis doctrinae studiis consecrata, novum illud Museum quod Nestoris illius nostri sempiternum fore monumentum iamdudum exspectamus, si non ad ipsum finem adductum, at inchoatum certe ostendere potuissemus. Ipsi meministis veteris poetae monitum illud:

"'Gratia ab officio quod mora tardat abest';

vestrum igitur officium est, viri Academici, qui beneficiorum tantorum non immemores estis, monumentum illud magnum ad exitum felicem quam maturissime perducere; nos interim nostro qualicunque laudis officio perfuncti, plausus illos vestros, qui hospiti nostro iam diu debentur, non iam amplius morabimur.

"Ergo vobis praesento Regiae Societatis Londinensis Socium, virum de studiis Geologicis optime meritum, Thomam Sterry Hunt."

OXFORD.—The Brackenbury Natural Science Scholarship at Balliol College has been awarded to Mr. T. F. McArthur, of Manchester Grammar School. *Proxime accessit*, Mr. J. J. Hart, Exhibitioner of the College. The following gentlemen distinguished themselves in the examination:—Mr. A. Ford Smith, Bedford Modern School; Mr. A. Wentworth Jones, Clifton College; and Mr. P. Hawkridge, Derby School. Mr. Ford Smith was elected to a Natural Science Exhibition.

The Statute respecting the inspection and licensing of lodging-houses was finally passed by Congregation on November 23. The following clauses were inserted concerning the duties of the Controller of Lodging-Houses and the Sanitary Inspector:—

"The Controller shall inspect every house proposed to be licensed for the residence of Undergraduates; he shall also visit, with or without notice, every licensed house once at least in each year, and report thereon to the Delegates.

"There shall be a Sanitary Officer appointed by the Delegates, for such period and under such conditions as they may determine. He shall inspect every house proposed to be licensed for the residence of Undergraduates, and shall make a Report to the Delegates on the sanitary condition of each house thus inspected. He shall also visit each licensed lodging-house once at least in every year, and any licensed lodging-house at any time by the order of the Delegates. The stipend of the Sanitary officer shall be determined by the Delegates in conjunction with the Curators of the University Chest.

"The Delegates may obtain, when occasion shall arise, additional advice, whether medical or of any other professsional kind. Any person whom they may thus employ shall receive such fee as shall be agreed on by the Delegates in conjunction with the Curators of the University Chest."

SOCIETIES AND ACADEMIES

LONDON

Meteorological Society, November 16.—Mr. G. J. Symons, F.R.S., president, in the chair.—Twenty-seven gentlemen were elected Fellows of the Society.—The evening was devoted to an account of the gale which passed across the British Isles, October 13–14, 1881, which had been prepared by Mr. G. J. Symons, F.R.S., with the assistance and co-operation of Mr. C. Harding and other gentlemen. There is evidence of the storm being formed in the Atlantic, about 150 miles south of Nova Scotia on October 10, and that at noon on the 13th there was a considerable disturbance about 600 miles west of Galway. At that time there were scarcely any instrumental indications in the British Isles of the coming storm; the barometer was falling at Valentia, but not rapidly, and at some of the western English stations it was rising. The curves of barometric fluctuation show very plainly the advance of the depression from west to east, for while at Valentia the minimum occurred at 2 a.m. on the 14th, on the east coast of Norfolk it is recorded that it did not occur till 4 p.m. This fact, coupled with others, seems to indicate an easterly progression of the barometric minimum at nearly forty miles per hour. As far as the sea is concerned, the chief force of the gale was felt on the afternoon of the 14th in the German Ocean, and there the great loss of life and destruction to shipping seems mainly due to the exceptionally violent squalls which were peculiar to this gale, as well as to the extremely sudden manner in which the wind increased to hurricane force. The afternoon became quite darkened by the salt water blown into the air, so that it was impossible to see a ship's length ahead. The barometric chart for 9 a.m. on the 14th showed that the pressure in the north of England was an inch lower than in the south, and nearly two inches lower than in the South of France. The area over which injury was produced was very large, and although not without precedent, it was happily rare. The record of 56 lbs. per square foot at the Royal Observatory, Greenwich, was the highest ever registered in that locality, and close by thirty-five trees were blown down in the park, and fifteen feet blown off the top of a spire which had been erected about forty years, the stone of which shows no sign of decay, and which had retained its position almost, if not wholly, by the gravitation of its mass. The general opinion seems to be that the structural damage over the greater part of the country was by no means unprecedented, and in the greater part of Ireland and the south-west of England was not even of an unusual character; but along the east coast and in the East Midlands the damage was excessive, and on the north-east coast unprecedented. In Scotland the destruction of trees was enormous.—Mr. J. Wallace Peggs, F.M.S., also read a paper on the structural damage caused by the gale as indicative of wind force, and remarked that since the

©1881 Nature Publishing Group

Tay Bridge disaster attention had once more been directed to the subject of wind pressure. He suggested that a conference of delegates from societies specially interested in the subject should be held, who should make experiments and carefully consider the whole question.

Entomological Society, November 2.—H. T. Stainton, F.R.S., president, in the chair.—Exhibitions: An aberration of *Urapteryx sambucaria*, L., Mr. C. O. Waterhouse.—A new species of *Antheræa* from the Gold Coast; and some microscopic preparations of the saws, &c., of various *Hymenoptera*, prepared by Mr. P. Cameron of Glasgow, Mr. W. F. Kirby.—Pieces of honeycomb constructed on a bare wall, without any protection; and specimens and figures of new varieties of *Armadillium vulgare*, L., and *Porcellio icaber*, Latr., Rev. A. E. Eaton.—A specimen of *Lycæna icarus*, Rott., var. *Icarinus*, Scriba, Dr. H. G. Lang.—An undescribed species of *Cicadidæ* from Borneo, with unusually developed opercula, Mr. W. L. Distant.—A female specimen of *Dufourea minuta*, Lep., Mr. T. R. Billups.—A specimen of *Scleroderma domestica*, Westw.; the larva was found parasitic on that of a Longicorn beetle in a pine-tree at Lyons; and some *Diptera* which attack figs in Turkey and Egypt, Sir S. S. Saunders (this led to an interesting discussion on fig-parasites and caprification).—Some remarkable tubes formed by Lepidopterous larvæ at Aden; and a specimen of *Cerura vinula*, L., which it was thought at first might belong to *C. erminea*, Esp., the President.—Papers read: Descriptions of new genera and species of Heterocerous *Lepidoptera* from Japan (concluded), by Mr. A. G. Butler; and a memoir on the various Dipterous insects (*Muscidæ* and *Tipulidæ*) destructive to cereals in Britain, by Prof. Westwood.

Geological Society, November 2.—R. Etheridge, F.R.S., president, in the chair.—Richard Paley Gardner, Henry Neville Hutchinson, Henry Johnson, William Regester, and George Tate, Ph.D., were elected Fellows of the Society.—The following communications were read: On the genus *Stoliczkaria*, Dunc., and its distinctness from *Parkeria*, Carp. and Brady, by Prof. P. Martin Duncan, M.B. Lond., F.R.S., F.G.S., Pres.R.M.S.—On the elasticity- and strength-constants of Japanese rocks, by Thomas Gray, B.Sc., F.R.S.E., and John Milne, F.G.S.—The glacial deposits of West Cumberland, by J. D. Kendall, C.E., F.G.S.

EDINBURGH

Royal Society, November 28.—The following were elected office-bearers, viz.:—President, the Right Hon. Lord Moncreiff; Vice-presidents: David Milne Home, LL.D., Sir C. Wyville Thomson, LL.D., Prof. Douglas Maclagan, M.D., Prof. H. C. Fleeming Jenkin, F.R.S., Rev. W. Lindsay Alexander, D.D., J. H. Balfour, M.D., F.R.S.; General Secretary, Prof. Tait; Secretaries to ordinary meetings: Prof. Turner, Prof. Crum Brown; Treasurer, Adam Gillies Smith, C.A.; Curator of Library and Museum, Alexander Buchan, M.A.; Members of Council: Prof. Campbell Fraser, Prof. Geikie, Rev. Dr. Cazenove, David Stevenson, Prof. Chrystal, Sheriff Forbes Irvine, Prof. A. Dickson, the Right Rev. Bishop Cotterill, Rev. Prof. Duns, Dr. Ramsay Traquair, John Murray, William Ferguson.

PARIS

Academy of Sciences, November 21.—M. Wurtz in the chair.—The following papers were read:—On the condition of achromatism in phenomena of interference, by M. Cornu. In a system of fringes of interferences produced with heterogenous light having a continuous spectrum there is always an achromatic fringe which plays the *rôle* of central fringe, and is found at that point of the field where the most intense radiations present a maximum or minimum difference of phase. M. Cornu indicates the properties of the achromatic line, and shows the inaccuracy of the accepted theory for determination of the central fringe.—Reactions of salts of gallium, by M. Lecoq de Boisbaudran.—On a bed of reindeer remains near Paris, by M. Gaudry. This bed was found by M. Vasseur at Montreuil, and the remains have been sent to the Museum. They comprise, with numerous bones of reindeer, remains of elephant, rhinoceros, horse, bison, freshwater shells, &c. The deposit (which is surmounted by beds of grey sand and mud) is supposed to belong to the great glacial epoch of boulder-clay. M. Gaudry is enabled to sketch the history of quaternary times in the Parisian basin.—Observations on the *rôle* of faults in the geological structure of the Western Alps, by M. Lory. Some large fractures can be traced continuously right through Dauphiné, Savoy, and Valais, producing longitudinal zones with different orographic characters and strata.—On the crystallisation of sulphides of cadmium and zinc, by M. Hautefeuille.—On the agreement of the curve of solar spots with the actions resulting from the eccentric motion of large planets, by M. Duponchel. Reviewing the observations collected by Wolf from 1608 to our time, he finds the mean period of the oscillations not 11·2 years, but 11·86, the time of a revolution of Jupiter, with which it seems really connected. The perturbations of the curve are distinctly *en rapport* with the times of revolution of the three large superior planets.—On the winter egg of phylloxera, by M. de Lafitte.—Elements of the orbit and ephemerides of the planet (217) Endore, by M. Callandreau. On some series for the development of functions with a single variable, by M. Halphen.—On a particular curve of the third order and on certain uniform functions of two independent variables, by M. Picard.—New method of dividing the circle into equal parts, by M. Pellet.—Integration of differential equations of the vibratory motion of a spherical bell, by M. Mathieu.—Numerical application of the theory of maximum yield of two dynamo-electric machines employed for transport of force, by M. Lévy. Referring to a case discussed by M. Deprez, he shows that, by adopting different resistances, he would obtain 10 horse-power at 50 km., with a maximum electromotive force of 5356 volts, instead of about 7000.—On M. Lippmann's method for determination of the ohm, by M. Brillouin.—Remarks on the electrolysis of water, by M. Tommasi. In decomposing water with a single element, copper wire being used as positive electrode, and platinum wire as negative, the quantity of copper dissolved is greater than the quantity deposited on the negative electrode; and this is explained by the thermal theory.—On the diformine of glycerine, by M. Van Romburgh.—On some spectral reactions of alkaloids and glucosides, by M. Hock.—Electric current produced by light, by M. Laur. Light affects the American process of amalgamation in Mexico. The author elucidated the action by experiments which reproduce, in complex form, effects that have been indicated by M. Edm. Becquerel (as that physicist pointed out).—On some new cases of phosphorescence in plants, by M. Crié. He lately observed *Auricularia phosphorea* and *Polyporus citrinus* to emit luminous radiations; also *Rhizomorpha* or the vegetative apparatus of many champignons; also *Xylaria polymorpha*. This is the first time emission of light has been observed in Ascomycetes.—Influence of the nature of food on sexuality, by M. Yung. He fed separate sets of tadpoles with fish, meat, coagulated albumen of hens' eggs, yellow of eggs, and with a mixed diet. These aliments do not appear to have a very distinct influence on the sex; but along with M. Born's experiments, those of M. Yung support the idea that a special diet afforded to young tadpoles from the time of leaving the egg, favours the development of a female genital gland.—Development of the egg of Melicerta, by M. Joliet.—On spermatogenesis in Selachians, by M. Hermann.—M. Hément communicated some further observations on the articulation of deaf mutes.—M. Daubrée presented an Italian work by Prof. Cossa, "Chemical and Mineralogical Researches on the Rocks and Minerals of Italy."

CONTENTS

PAGE
The Accidents in Mines Commission 97
Celestial Objects for Common Telescopes 98
Carnac 99
Our Book Shelf:—
  Faber's "Mind of Mencius" 99
Letters to the Editor:—
  Primitive Traditions as to the Pleiades.—R. G. Haliburton . . 100
  The Pronunciation of Deaf-Mutes who have been Taught to Articulate.—William E. A. Axon 101
  Tanganyika Shells.—C. A. White 101
  Velocity of Wind.—Charles Alex. Stevenson 102
  Arctic Research.—Dr. J. Rae, F.R.S; D. Wetterhan . . . 102
  Spectrum of the Electric Light.—J. Hopkins Walters 103
A Glimpse through the Corridors of Time, II. By Prof. Robert S. Ball, LL.D., F.R.S. 103
Popular Natural History (*With Illustrations*) 107
Ami Boué. Prof. Arch. Geikie, F.R.S. 109
Notes 111
Our Astronomical Column:—
  The Saturnian System 114
  The Lunar Eclipse on December 5 114
  Variable Stars 114
The Royal Society—Address of the President. By Dr. William Spottiswoode, Pres. R.S. 115
University and Educational Intelligence 119
Societies and Academies 119

©1881 Nature Publishing Group